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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,238	02/27/2002	Bradley F. Bowden	SP01-330	7779
22928	7590	02/03/2004	EXAMINER	
CORNING INCORPORATED			VINCENT, SEAN E	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	
			1731	

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/086,238

Applicant(s)

BOWDEN ET AL.

Examiner

Sean E Vincent

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show a bulb shaped fused silica tube having an interior portion as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the fused silica tube must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

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art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed specification and claims did not support "glazing". The original disclosure can only support the details stated on page 7, lines 16-18 of the specification which would be that the exterior portion of the green body is briefly exposed to extreme heat to close the porosity of the surface while maintaining the porosity of the interior of the body.

6. Furthermore, original claim 17 recites flame polishing of a solid porous green body. Flame polishing was disclosed in the original claims and described by page 6, lines 10-12 of the original specification, but only for closing the porosity of the exterior of a container. To provide support for claim 17, the specification should be amended to recite flame polishing in or adjacent to the text of page 7, lines 16-18. This feature is not new matter since it was in an originally filed claim.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 25-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The fused silica tube claimed would have a plain meaning to one of skill in the art of a hollow cylinder open at both ends. However, the specification's only mention of the tube describes it as "bulb shaped" (page 8, line 1), suggesting a closed end with a larger diameter than an open end. The scope of the claims cannot be determined and so they are indefinite.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 25 and 26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kamiya et al (US 4772303). Figure 2 and col. 3, line 11 to col. 4, line 49 clearly disclose filling a quartz tube with glass soot particles, evacuating the interior of the tube, and collapsing the tube while heating to form a solid glass body (which, in the case of Kamiya et al, is immediately drawn into a fiber but the claims do not exclude further method steps).

***Claim Rejections - 35 USC § 103***

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 1, 5-7 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segawa et al (4,938,788) taken alone.

13. Segawa et al disclose the process of providing a silica glass container or capsule, filling with silica powder, evacuating, sealing and subjecting the sealed capsule to hot isostatic pressing to produce a glass block or perform (See Examples 1, 2 and Col. 3, line 48 ff). In view of the discussion at Col. 1, line 10 ff, it is clear that Segawa et al envisions the utility of the formed glass as an optical perform. Segawa et al did not expressly teach that the green body included a

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non-porous exterior and porous interior. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make a green body with a non-porous exterior and a porous interior for the following reasons. First, applicant has described the instant green body as a vitreous container, i.e. glass container. (note page 3, line 16 and the glass container of Segawa et al would inherently be non-porous. The examiner also takes the position that silica powder of Segawa et al qualifies as the instant "porous interior portion". The silica powder disclosed by Segawa et al would suggest the instant glass particles in view of the teachings of the amorphous powder produced by vapor phase as disclosed at Col. 3, lines 9-25).

14. With regard to other claimed features, Segawa et al (Col. 5, line 48 ff) discloses treatment or purification with chlorine gas at elevated temperatures. The silica containers or capsules of Segawa et al (Col. 3, lines 45-59) would clearly suggest the silica tube of claims 25-27 (note that the silica tube disclosed by applicant in page 8, line 1 was a "bulb shaped fused silica tube", but no further description or illustration was provided). It is the position of the examiner that "soot" and "cullet" are well known in the art to be sources of glass powder. See Hihara et al, col. 5, lines 1-24.

15. Claims 2-4, 8 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segawa et al (4,938,788) in view of Moritz et al (5,866,062) or Englisch et al (5,736,206) and/or Bergna et al (3,301,635).

16. The claims recite details regarding the production of the green body or glass container or glass capsule by casting or glass blowing (note claim 22). While Segawa et al failed to teach claimed glass forming techniques, the examiner submits that glass forming techniques for the production of hollow articles by casting with or without vacuum and glass blowing are well

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known to the art and obvious techniques. As evidence, both Moritz et al (Fig. 3 and Col. 3, lines 18-27) and Englisch et al (Col.3, line 19 ff), disclose the use of slip casting of glass particles for the production of hollow green bodies or containers. It would have been obvious to use a casting process for the production of the instant green bodies since the process would be expected to perform in the art expected manner. With regard to claim 8, Bergna et al disclose ammonia is a dispersant or stabilizer for glass aqueous slurries (Col. 6, line 38) and it would have been obvious to use this material for its intended purpose because Bergna et al demonstrated that it was well known in the art.

***Allowable Subject Matter***

17. Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach or fairly suggest does not suggest the method as claimed including steps of fusing and exposing as presented in claim 9 (no limitations need be read into claim 9 from the specification, but "exposing" is explained well in page 7 of the specification). It would not have been obvious to add the fusing and exposing steps of claim 9 to the processes of the prior art.

19. Claims 10-15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action. (caution: if "glazing" were deleted from claim 10, claim 11 would be a substantial duplicate thereof)

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20. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach or fairly suggest the methods of forming an optical blank as claimed wherein a porous container is made from an aqueous suspension of cullet and soot particles and later filled with glass particles of the same material composition, flame polished, evacuated and then HIPed, as claimed. It would not have been obvious to combine the prior art to arrive at the claimed series of steps.

### ***Response to Arguments***

21. Applicant's arguments filed October 31, 2003 have been fully considered but they are not persuasive.

22. In response to the argument that Segawa et al does not teach glazing, the examiner disagrees. "Glazing" was not used or defined by the applicant's specification and so any or all of its plain meanings to one of ordinary skill in the art can be used. Some examples are the installation of glass panels in window frames; coating with an oxide suspension, drying the suspension and firing to melt the oxide into a glassy coating; and chemical vapor deposition of glassy material. Segawa et al places glass powder in a glass capsule, so Segawa et al "glazes" the glass powder.

23. In response to the argument that Segawa et al does not teach a non-porous exterior and a porous interior, the examiner disagrees. The applicant appears to have misconstrued the discussion within the original rejection. The wording of the rejection is clarified in this office action, which is a non-final office action.

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***Conclusion***

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E Vincent whose telephone number is (571) 272-1194. The examiner can normally be reached on M - F (8:30 - 6:00).

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

26. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to be 'SE Vincent', written in a cursive style.

Sean E Vincent  
Primary Examiner  
Art Unit 1731

S Vincent